
Paris Agreement: History And Effects

Abstract

Climate Change has become one of the criticalities towards the sustainability our existence, with continuous increase in carbon and greenhouse gas emissions and lack of significant targets to tackle this global problem, The purpose of this paper is to deliberate on the Paris Accord, and analyze if the agreement is ambitious enough, if it will bring the planet Earth to a global temperature of two degrees celsius target and further below pre industrial levels, in this paper we conclude that per the current progress and performing indicators of member parties' self-determined targets to reduce emissions, we realize that the Paris Agreement may not be enough.

Introduction

The Paris Agreement is an accord within the United Nations Framework Convention on Climate Change (UNFCCC), aimed at mitigating greenhouse-gas-emissions , while increasing the ability to adapt to the adverse effect of climate change, and creating the required finance flows to arrive at these targets. Signed in Le Bourget, Paris, 2016, by representatives of 196 state parties at the 21st Conference of UNFCCC and adopted on 12 December 2015. As of February 2020, all UNFCCC members have signed the agreement, and the only significant emitters which are not parties are Iran and Turkey.

The Paris Agreement's main goal is decrease global average temperature to well below 2 °C above pre-industrial levels; and further limit the increase to 1.5 °C.

History

Owing to the 1992 Earth Summit in Rio de Janeiro, Brazil, there was an awareness to cut emissions in 1997, countries adopted the Kyoto Protocol, a legally bounding treaty with emission reduction targets. However, the agreement was deemed ineffective because the world's two top emitting countries, China and the United States, chose not to participate.

In Doha, Qatar, 2012 during the 18th Conference of the Parties (COP18), delegates agreed to extend the Kyoto Protocol until 2020. In Paris they created a new, comprehensive, legally binding climate treaty that required all countries including major carbon emitters not abiding by the Kyoto Protocol to limit and reduce their emissions of carbon dioxide and other greenhouse gases. All countries were tasked to submit their emission reduction plans, those plans became the intended nationally determined contributions (INDCs). By December 10, 2015, 185 countries had submitted their plans to reduce emissions by 2025 or 2030.

Objectives of the Paris Agreement

In line with Article 2 of the accord, the agreement was to decrease global warming by;

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- (a) Reducing global average temperature to well below 2 °C above pre-industrial levels and further limit the temperature increase to 1.5 °C above pre-industrial levels.
 - (b) Developing adaptive measures to promote climate resilience leading to reduction in emission quantities.
 - (c) Providing the required financial flows to realize these targets.

Global carbon emitters;

- China (29.4%)
- United States (14.3%)
- European Economic Area (9.8%)
- India (6.8%)
- Russia (4.9%)
- Japan (3.5%)
- Other (31.3%)

Is the Paris Agreement Enough?

UN Secretary General Antonio Guterres, has made many comments on the shortfalls of the accord, in his recent speech at the summit on Climate Action in New York, he threatened, that even if Paris targets are fully met, the world still faces what he described as a catastrophic three-degree temperature rise by the end of the century. He described the situation as a battle for our lives, but it is a battle that can be won.

Negative Impacts

1. The nationally determined the commitments are not nearly ambitious enough, according to scientists per the current targets of the Paris Agreement the Earth's temperature will increase by 3 degrees Celsius by the end of century, compared to pre-industrial levels. Climatologists warned that just a 2 degree increase could cause a worldwide catastrophe. All countries need to triple their efforts towards emission reduction.
2. There is critical need to institute a global tax on carbon, without a carbon tax, there is no real financial incentive for countries to transition to more sustainable and clean energy sources.
3. Without punitive measures against parties who try to go contrary to the set targets or who decide to leave the agreement e.g. U.S under Donald Trump, presents real challenges to the efficacy and strength of the accord to hold up and be respected by all parties. This provides incentives for countries to continue emitting CO₂ at alarming rates without having to suffer any negative consequences. In the absence of a regulatory body, sanctions or monetary fines there is true no control.
4. There are no commitments in the agreement to redirect or allocate funds towards environmental and sustainable measures or promotion of climate activism, to create awareness and sensitization.
5. The Paris Agreement has received worldwide congratulations and complements hailing it as a monumental step toward addressing climate change, and has since created a sense of false hope, It is evident since the agreement came into force, emissions have risen by approximately 4 percent; coal emissions increased 1%, oil by 1.7% and gas by 3%.

Will the planet arrive the 2°C Target?

The Intergovernmental Panel on Climate Change (IPCC), which is the advisory body to the UN on climate, proposed four (4) trend scenarios of temperature increase till 2100. Let's take into account a current rise of 1°C). Based on adopted policies, the Paris Agreement and past data on emissions have realized temperature rises. The four scenarios put forward are as follows:

- Scenario 1. Business as usual: In the absence of any action, emissions will continue at the current rate, meaning the temperature rise would be between 4°C and 5°C.
- Scenario 2. Insufficient energy transition: If the current policies to mitigate emissions growth continue to be applied, the rise would be between 3°C and 4°C.
- Scenario 3. Intermediate energy transition: if the policies of the Paris Agreement adhered to fully, the temperature rise would be 2°C
- Scenario 4. Ambitious energy transition: If the policies within the Paris Agreement are strengthened through increase in commitments of INDC's the temperature rise would be 1.5°C.

These scenarios (Caixa Bank Research, the climate challenge; the future of the world at stake, 2019) are only benchmarks to help appreciate how living under sustainable conditions will look, and the kind of commitment and policies required to achieve such feat. Comparing CAT's assessment of the expected absolute emissions in 2020, 2025, and 2030 with benchmark emissions consistent with the 1.5°C Paris Agreement goal and for reference purposes with those consistent with the former 2°C Cancun goal, there are a large deficits between the levels of emissions in 2025 and 2030 (11–14 GtCO₂e in 2025 and 26–29 GtCO₂e in 2030). Due to years of inaction and the current increase in emission trends, to arrive at the two degrees Celsius goal, we will require an increase in the level commitments stipulated INDC's of the Paris Agreement as alluded to by Antonio Guterres and the environmental and science community.

According to world statistics the Earth's average temperature is continually rising and the trend is expected to increase owing to current, past accumulated emissions/gases and thermal inertia (of 30% to 40%) dissolved in oceans and water bodies which have led to an upsurge in temperature and acidity.

Carbon Scenarios

Emission scenarios have been mapped out since the 90's, with the sole purpose of analyzing the climate change impact and possible solutions to resolve it. The Intergovernmental Panel on Climate Change (IPCC) is the body responsible for this assessment. The initial scenarios were developed in 1992 and 1995, these scenarios were reevaluated in the course of time which advised on recommendations in terms of emission drivers. The recommendations were primarily on;

1. carbon intensity of energy supply,
2. the income gap between developed and developing countries,
3. Sulfur emissions.

Under thoughtful scrutiny, IPCC in 1996 mapped out new scenarios.

According to the IPCC Special Report on Emission Scenarios (SRES), Four (4) qualitative storylines produce four sets of scenarios called families: A1, A2, B1, and B2. A probability of forty (40) scenarios have been realized by six (6) modeling teams. All the scenarios are probable and in no order of occurrence or magnitude. The scenarios consists of six (6) scenario groups: one (1) group each in A2, B1, B2, and three groups within the A1 family, representing alternatives of energy solutions namely: A1FI (fossil fuel intensive), A1B (balanced), and A1T (predominantly non-fossil fuel).

Within each family and group of scenarios, some share “harmonized” scenarios (HS) on population, GDP, and energy. For scenarios that show uncertainties in their driving factors beyond HS we refer to as “OS”.

- The A1 storyline predicts a future of very rapid economic growth, a population that peaks within the mid-century and immediately declines, owing to the influx of modern and efficient technologies. The A1 scenario family develops into three groups (A1FI, A1T, A1B), the groups are differentiated by their technological emphasis: fossil intensive, non-fossil energy sources, and a balance across all sources respectively
- The A2 storyline predicts a very heterogeneous mix, as a result of self-reliance and preservation of local identities.
- The B1 storyline predicts a convergence with the same conditions, as in the A1 storyline, but with rapid changes in economic structures forming a service and information based economy, with reductions in material intensity, and the introduction of clean energy technologies.
- The B2 storyline predicts a key focus on local solutions to economic, social, and environmental sustainability. Comparatively A2, it has lower population growth rate.

Recommendations

- Align investments with net-zero CO₂ emissions
- Adapt ways to strengthen societies ability to deal with the impacts of climate change
- Cultivate transparency and global stock take of all parties including punitive actions for any party reneging on its commitment.
- Increasing commitments (INDC's) to reduce emissions

Conclusion

The ultimate goal of the Paris Agreement is to maintain global temperature of not more than two degrees Celsius compared to pre-industrial levels. The unfortunate truth is that four (4) years on, the world is far from that target, due to the lack of enough effort and ambition of member parties.

The accord allows each party to establish its own climate commitment (INDC's), detailing measures to be employed to cut down emissions and indicative timelines, yet despite this effort most, if not all seem to be failing woefully, the sad truth is that the Paris Agreement may not be enough.

Climate Action Tracker (CAT) is an international organization that checks the status of the parties (32) that signed the Paris Agreement and implemented their INDC's, the realization is

that almost all countries are failing to meet the Paris goals, Per CAT research, taking into consideration current commitments, the global temperature would increase by at least 3.2 Celsius degrees by 2100.

Aside the failures of the parties' emissions are currently on an up climb. Research by the Global Carbon Project said emissions rose 2.7% in 2018, mainly because of an increase in oil consumption. A growth of 1.6% was also registered in 2017, ending a three-year period when emissions had slowed down.

References

1. Caixa Bank Research, the climate challenge; the future of the world at stake, 2019
2. Climate Action Tracker
3. UNEP IPCC special reports on emission scenarios, 2000
4. The editors of Encyclopedia Britannica
5. Wikipedia
6. Columbia law, Michael B. Gerrard, December 2016.
7. ZME science platform, 2019
8. World Resources Institute, 2018
9. European commission, Climate Action Platform